CLASSIFICATION CONFIDENTIAL CONFIDENTIAL

50X1-HUM

CENTRAL INTELLIGENCE AGENCY
INFORMATION FROM
FOREIGN DOCUMENTS OR RADIO BROADCASTS

REPORT
CD NO.

COUNTRY	USSR	DATE OF INFORMATION	1951
SUBJECT	Economic - Coal mining	DATE DIST.	16 Jul 1951
HOW PUBLISHED	Monthly periodical		
WHERE PUBLISHED	Moscow	NO. OF PAGES	2
DATE PUBLISHED	May 1951	SUPPLEMENT TO REPORT NO.	
LANGUAGE	Russian		

THIS IS UNEVALUATED INFORMATION

SOURCE Za Ekonomiyu Topliva, No 5, 1951.

SOME DONBASS ANTHRACITES RECLASSIFIED TO MEET MODERN REQUIREMENTS

S. A. Tager

In conformance with the approved standard (GOST 5237-50), Donbass anthracites are classified according to the size of the lumps as follows:

Slab	AP	> 100 mm
Large	AK	50-100 "
Nut	AO	25-50 "
Fine	AM	13-25 "
Pea	AS	6-13 "
Culm	ASh	Less than 6 "

In addition to these grades, the following grades of anthracite also exist:

Run-of-the-mine anthracite with culm	ARSh	0-100 mm
Pea coal with culm	ASSh	0-13 "

The GOST has also provided for separating an AZ class (anthracite rice coal) with the size of the lumps ranging from 3-6 millimeters.

The indicated system of classifying Donbass anthracites was connected historically with the most efficient use of anthracite, according to grades, as fuel in installations of different types. A relatively short time ago, the layer method was the only one for the industrial consumption of anthracites and the chief consumers were railroad locomotives and plant-heating boiler installations.

Boiler installations were provided with manually operated grates, often functioning without induced draft. In proportion to the increase in capacity of stationary boilers, layer burning of anthracite on chain grates increased in practice. Fireboxes, designed specifically for layer combustion, operated

CLASSIFICATION CONFIDENTIAL CONFIDENTIAL

STATE	X	NAVY	X	NSRB		DISTRIBUTION							
ARMY	X	AIR	X	FBI									

successfully on graded fuel, and, when anthracite was used for layer combustion, it was particularly necessary to use graded fuel since anthracite possesses physicochemical properties which make it one of the most difficult fuels to use for industrial combustion.

Since a large number of the manually operated fireboxes operated without induced draft, it became expedient to burn large grades of anthracite in them because, in this case, very little resistance of the layer resulted. The AK, AO, and AM grades were selected for firebox fuel. Further progress in the technique of layer combustion, in connection with the adoption of forced draft, has made it possible to use the smaller AS grade effectively.

In Tsarist Russia, culm, the ASh grade of anthracite, was not utilized at all. Soviet power engineering pioneered in using culm in pulverized form in regional electric power stations. In this way the problem of utilizing all grades of Donbass anthracite was solved.

Modern technique, however, has introduced new problems. Mechanized coal mining has increased the culm content of the anthracite mined to such an extent that consumers' requirements for graded anthracite for layer combustion cannot be satisfied. On the other hand, modern types of layer-combustion fireboxes have been designed which present other requirements as to the grade of coal burned in them. Therefore, it is advisable to revise the existing system of classifying Donbass anthracites to conform to new mining and combustion conditions.

Mechanization of fuel combustion in industrial power engineering is spreading extensively at present. One of the principal characteristics of fireboxes with stokers is their ability to burn a mixture of anthracites of different grades with the maximum size of the lump about 30 millimeters. The author suggests the advisability of creating a new anthracite grade, to be called AZM, to include lumps ranging in size from 3-25 millimeters and embracing the sum total of the AZ, AS, and AM grades.

This new classification for anthracites would reduce the culm content in anthracite mining since it would now include only lumps from 0-3 millimeters in size instead of lumps from 0-6 millimeters. Electric power stations would not have to consume so much electricity in crushing the smaller lump culm supplied to them. Grading plants would have less work to do since three grades would be combined in one.

- E N D -